

REMARKS

35 U.S.C § 112

Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 14 recites the limitation "the piston against the bladder" in line 2 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim 14 was amended to correct claim dependency. The feature finds support in base claim 12.

35 U.S.C § 102

The Examiner rejected claims 1, 9-11 and 14 under 35. U.S.C. 102(e) as being anticipated by Gore (US 2004/0202904).

Claim 1

The Examiner states:

Claims 1,9-11 and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Pre-Grant Publication No. 2004/0202904 hereinafter Gore.

As seen in figures 2 and 2A-2C, Gore teaches a fuel cartridge 206 having a housing 230, a heat producing element (i.e. wire) 208, disposed in the cartridge and in thermal communication with the cartridge and spacing a vapor portion from a liquid portion (paragraphs [0039]-[0051]).

Applicant submits that Gore is not understood to disclose each and every feature of claim 1 as arranged in claim 1. Gore fails to disclose or suggest a heat producing element disposed in thermal communication with an interior portion of a housing. Rather, Gore describes:

The electric heating element 208 is electrically coupled to the first and second electrical contacts 240 and 242 of FIG. 2, and is configured to controllably produce heat in response to the controlled provision of electrical energy to the electric heating element 208 by way of a heater control (not shown, refer to FIG. 1).¹

¹ Gore, at paragraph [0051]

...

The film guide 264 is further configured to guide a usable portion 268 of the film strip 210 generally away from the supply reel 246 and to support the usable portion 268 in cooperative (i.e., usable, or heat-able) adjacency with the electric heating element 208. In this way, the electric heating element 208 can be used to liberate hydrogen gas from the fuel compound 270 of the usable portion 268 of the film strip 210.²

The heating element of Gore is not in thermal communication with an interior portion of the housing. Rather, Gore relies on a film guide to bring a film strip in cooperative adjacency with the electrical heating element. The film strip is configured to support a fuel compound that contains hydrogen which is liberated on application of heat from the heating element. Gore does not even suggest, much less disclose the heating element in thermal communication with an interior portion of the housing since such a thermal communication would only dissipate heat away from the fuel strip and decrease the efficiency of the system described by Gore. Thus, Applicant submits that claim 1 is patentable over Gore for at least the foregoing reasons.

Dependent claims 9-11 are patentable for at least the reasons mentioned with respect to claim 1.

Claim 12

The examiner rejected Claims 12, 14, 16 and 17 under 35 U.S.C. 102(e) as being anticipated by U.S. Pre-Grant Publication No 2005/0023236 hereinafter Adams.

The Examiner states:

As seen in figures 1 and 15, Adams teaches a fuel cartridge 10, that is prismatic in shape, having a housing 12, a fuel egress port 16, a bladder 14 that holds methanol (paragraph [0047]), a piston 78 urged against the ladder and a spring 76 to urge the piston against the bladder (paragraphs [0049], [0066] and [0067]).

Applicant submits herewith a declaration under 37 C.F.R. § 1.131. The declaration and Exhibit A accompanying the declaration establishes a date of conception of the invention that is prior to the earliest priority date of Adams. Applicant submits that Adams is therefore not a prior

² *Id.*, at paragraph [0053]

art reference under 35 U.S.C. 102(e). Claim 12 is understood to be patentable over Adams for at least this reason.

Dependent claim 14 is patentable for at least the reasons mentioned with respect to claim 12.

35 U.S.C § 103

The Examiner rejected claims 1 and 8-17 as being unpatentable over Adams in view of Gore. The Examiner states:

Adams as discussed above is incorporated herein. Adams further teaches supplying methanol to a Direct Methanol Fuel Cell (paragraph [0047]).

Adams does not teach a heat producing element.

Gore as discussed above is incorporated herein. Gore further teaches powering the heat-producing element with a battery (paragraph [0031]).

At the time of the invention it would have been obvious to one having ordinary skill in the art to provide a heat-producing element in the fuel cartridge of Adams as taught by Gore in order to vaporize the methanol in the cartridge before entering the direct methanol fuel cell of Adams so that the rate of reaction can be accelerated in the direct methanol fuel cell of Adams thus increasing the overall efficiency of the cartridge and fuel cell system of Adams.

Applicant submits that Adams cannot be considered a prior art reference under 35 U.S.C. 103(a) for at least the reason mentioned with respect to claim 12. Therefore, Applicant contends that this rejection has been overcome and should be removed because Gore alone neither describes nor suggests the features of 1, as argued above, and because Gore does not suggest the features that the examiner relies on Adams to teach.

Double Patenting

The Examiner provisionally rejected claims 1, 8, 12 and 17 on the ground of double patenting as follows:

Claims 1, 8, 12 and 17 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 11 and 12 of copending Application No. 10/644,818.

Application No. 10/644,818, as cited by the Examiner, is not a related application. It is assumed the Examiner meant to refer to co-pending Application No. 10/664,818.

Applicant submits that claims 1, 8, 12 and 17 are patentably distinct from claims 11 and 12 of co-pending Application No. 10/664,818. The Examiner contends:

Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of copending Application No. 10/644,818 fully encompass the scope of instant claims the only difference is claim 12 provides further structure for the storage of the fuel which has been found in the prior art.

Applicant disagrees. Neither claim 11 nor claim 12 of co-pending Application No. 10/664,818 includes a heating element in thermal connection with an interior portion of the housing. The heating element is recited as a limitation of independent claim 1. Claims 11 and 12 of Application No. 10/664,818 also do not include a bladder or piston as recited as limitations of independent claim 12.

The Examiner further rejected claims 1, 8, 12 and 17 on the ground of double patenting as:

Claims 1, 8, 12 and 17 provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-8 and 10 of copending Application No. 10/664,822.

Applicant submits that claims 1, 8, 12 and 17 are understood to be patentably distinct from claims 1-8 and 10 of co-pending Application No. 10/664,822. Claims 1-8 and 10 of co-pending Application No. 10/664,822 do not recite a heating element, a bladder and a piston. The Examiner contends:

Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of copending Application No. 10/664,822 fully encompass the scope of the instant claims, the only difference is the instant claims further limit the structure by adding either a heating element or a bladder and piston arrangement.

Applicant disagrees and submits that at least for the foregoing reasons, a terminal disclaimer is not necessary. There would be no time-wise extension of the subject matter of

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either Application No. 10/664,818 or Application No.10/664,822 by granting of the claims in the current application. The current claims require non-obvious features of "a heat producing element disposed in thermal communication with an interior portion of the housing" as well as a bladder and piston arrangement, which are neither suggested nor claimed in the claims of either Application No. 10/664,818 or Application No.10/664,822.

Please apply any charges or credits to deposit account 06-1050.

Respectfully submitted,

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